

The value of lick supplements on dry veld and crop residues

By Ronél Joubert, animal nutritionist, Feedtek

Lick supplements are precisely what it says: a product containing elements aimed at supplementing what available grazing lacks in order to meet the animal's nutritional requirements. Intake is regulated to allow for the ingestion of only small amounts at a time. Lick supplements are meant to optimally supplement existing grazing.

It is an easy way of providing essential nutrients and certain additives to livestock. Some of these additives include products that, among others, combat internal and external parasites (including ticks and midges), improve digestion and utilisation of poor-quality pasture, and rumen buffers that prevent acidosis on harvested fields.

Which lick to give when?

When plant material is lush and green it is able to meet the energy and protein requirements of most livestock. South Africa has vast regions that are deficient in phosphate, and therefore require supplementing throughout the year. When plants are green the emphasis is phosphate licks. The protein content of plants decreases once the season changes and the vegetation start to dry off.

The remaining roughage is, however, still able to satisfy the animals' energy requirements to some extent. This is when it becomes important to put out a lick supplement containing both phosphate and protein (protein lick). As the dry season progresses the protein and energy content of the grazing becomes less, and eventually only limited grazing and crop residues will be left.

It is at this point that an energy lick must be provided. The secret is to give it before animals start losing condition. This means that supplementation can be given for longer at lower levels; postponing lick supplementation will only lead to more complementary feed

being required for an indefinite period to help animals maintain condition.

Mineral requirements

Other macrominerals such as calcium, magnesium and sulphur, as well as a number of trace minerals should also be supplemented daily. The amount required is season and region specific. It is a fact that mineral requirements differ from region to region. Furthermore, vitamins, especially A and preferably also E, should be supplemented once the season changes from green to dry.

One often hears that protein and energy licks should be supplied together to meet whatever protein and energy deficiencies there might be later in the season. However, a well balanced energy lick contains enough protein, phosphate, vitamins, and minerals to satisfy animals' demand when ingested at recommended levels. An energy lick consists mostly, but not exclusively, of energy. It is unnecessary to provide a protein lick additionally when an energy lick is fed.

Why licks for livestock?

It is said that animals in the wild do not have access to lick supplements, so why should livestock get licks? The thing to note here is that, unlike livestock, wild animals are not restricted to certain regions and therefore have access to a wider variety of plants and mineral sources, allowing them to select the more palatable species and plants with higher nutritional value.

Livestock, on the other hand, are typically confined to certain areas, and the amount and type of grazing they have access to are limited. Lick supplements therefore provide what livestock cannot get from their environment. The pressure on livestock to produce annually is also more intense – small stock, for instance, are often expected to produce multiples and, in some production systems, to lamb more than once a year.

Furthermore, livestock must also show maximum production, be it milk, wool, or meat. Crop residues provide livestock with the lowest quality roughage with the lowest nutritional value by far. Production under these conditions can be improved and weight loss kept to a minimum by providing the correct lick supplement.

Why a balanced lick?

The most important reason for providing lick supplements is to boost rumen micro-organism growth and function. These microbes are responsible for digesting and transforming roughage into a nutritional source that ruminants can utilise. The better the microbial function, the better the animal's ability to utilise roughage. However, like all living organisms, microbes require energy in the form of carbohydrates, along with nitrogen and sulphur for optimal functioning.

There is a good reason why phosphate supplementation is emphasised. It plays a pivotal role in converting ingested feed into a usable form of energy for the animal. This is an often-underestimated function –

the more phosphorus in the blood, the more is excreted through saliva, the better the rumen microbes will function.

Something to remember is that it is one of the primary elements necessary for skeletal formation. The Karoo has several areas with known phosphate deficiencies in the dry summer months, often forcing livestock to look for animal bones on which to chew (these bones contain high amounts of phosphate). This heightens the risk of unvaccinated livestock developing botulism.

Be judicious when adding individual nutrients, as they must be included in a very specific ratio to activate the rumen. The lack, or imbalance, of these additives will lead to reduced intakes, feed conversion and even mortalities, with a consequent financial loss.

Smell and taste play a major role in what animals choose to ingest, although these two things usually have no bearing on what they actually need to boost production and health. Giving animals

a free choice of individual nutrients is therefore not always an option.

Lick blocks and loose licks

Lick supplements can be offered in the form of a lick block or a loose lick (meal), each with its advantages and disadvantages. Lick blocks are more weather-proof and there is no need for lick troughs. In terms of loose licks, additives can be included in accordance with what is required. One example is the inclusion of anion salts to prevent bladder stones in male animals on post-harvest fields covered in kernels.

Loose lick mixes are perfect for regions with known major nutrient-specific deficiencies, because it can supplement any nutrient at any amount. It is easy to manipulate intake by adding or omitting raw materials that regulate lick intake. Loose licks are also generally cheaper.

Take note of these guidelines:

- Lick supplements exist to supplement specific nutrient deficiencies.

This creates a balance between nutrients, which leads to the best possible utilisation of the available plant material.

- A lick is there to supplement and not replace the available feed. Confined animals with limited access to dry matter (especially towards the end of the dry season) are forced to ingest more lick than they should. This is a sign that roughage should be provided along with the lick supplement. No lick can replace roughage.
- Lick supplements should promote controlled, voluntary lick intake on a consistent basis. Variation in lick intake among individual animals is a major challenge. However, there are several ways to solve this.

For the best results from lick supplements and for maximum return on your investment, stick to these guidelines as closely as possible. **SF**

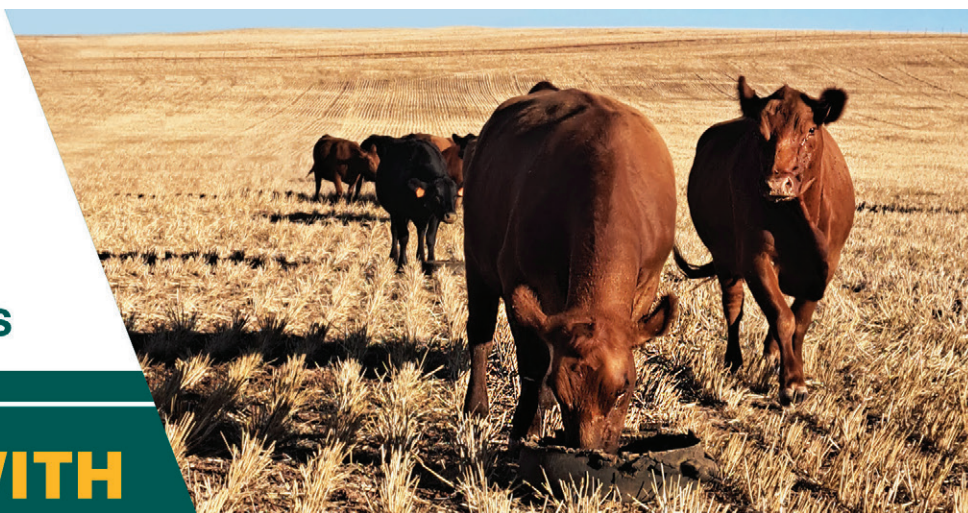
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